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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**



Application Number: 09/811,987
Filing Date: March 19, 2001
Appellant(s): BRUCHMANN ET AL.

David M. LaPrairie
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed February 3, 2006 appealing from the Office action mailed May 19, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

| | | |
|---|---|---|
| U.S. 4,623,709 | Bauriedel | November 18, 1986 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, and 4-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bauriedel ('709).

Patentee discloses methods for producing polyurethane prepolymers, wherein the methods encompass reacting a diisocyanate having isocyanate groups with differing reactivities with a polyol, including triols and higher functionality polyols, to yield a product having both isocyanate functionality and isocyanate reactive functionality, including single hydroxyl functionality, which is then reacted with another diisocyanate. Despite appellants' arguments, patentee discloses preferred ratios of initial hydroxyl groups to initial isocyanate groups which will yield appellants' claimed addition product (A). See abstract and columns 2-5, especially column 5, line 4 within Bauriedel. The position is taken that when the disclosed trifunctional or higher functional polyols are used at the disclosed ratios, the disclosed processes and resulting products anticipate appellants' process and high-functionality polyisocyanate. For example and as previously made of record, in order to obtain appellants' addition product (A), a diisocyanate

need only be reacted with a triol at an isocyanate index ratio of 1.33:1. The reference fully discloses the diisocyanate, the triol, and an isocyanate index ratio range that encompasses this ratio (Patentees' preferred OH/NCO ratio range at column 5, line 4 converts to an isocyanate index ratio range of 1:1 to 1.67:1), and it is not seen that appellants' arguments have adequately or sufficiently explained why the reaction of these reactants at this ratio does not yield appellants' process and product. It is noted that appellants' have presented no definitive or specific response to this characterization of the prior art.

However, if it is determined that the reference fails to be anticipatory due to the fact that diols are also disclosed, the position is taken that it would have been obvious to one seeking increased functionality isocyanates to utilize the disclosed increased functionality polyols, while operating within the disclosed preferred index ratio range.

The examiner has considered appellants' arguments of February 3, 2006; however, despite appellants' arguments, the disclosed processes are considered to encompass scenarios where only a single hydroxyl group remains after step one. This position is considered to be supported by the disclosure at column 3, line 45 of Bauriedel, wherein "an unreacted hydroxyl moiety" is referred to. As aforementioned, the disclosed polyols, diisocyanates, and index ratios encompass reaction schemes that will yield a product having a single hydroxyl group and multiple isocyanate groups. These schemes yield products that are considered to correspond to appellants' claimed addition product (A). Appellants' arguments appear to be primarily concerned with the reference's recitations of plural hydroxyl moieties. The examiner has considered these recitations; however, the position is taken that this language refers not to individual product molecules but to the product compositions as a whole. In other words, the

reaction mass contains a plurality of hydroxyl groups, as well as isocyanate groups. It is not seen that the language constitutes a definitive requirement that the individual product molecules contain multiple hydroxyl groups. Appellants have additionally referred to the language beginning at column 3, line 38 of the reference to support their position; however, it is noted that this language is prefaced with the phrase, "Stated in its broadest terms,..."; therefore, at the outset, this language should be viewed as pertaining to the broadest embodiment of the invention and not limiting or indicative of more narrow embodiments of the invention, such as those where a single hydroxyl group and multiple isocyanate groups are present per molecule. Furthermore, though the use of diisocyanates and diols are outside the scope of appellants' claims, the use of these reactants are within the purview of the patent as evidenced by the examples, and the position is taken that the examiner's interpretation of the patent's disclosure is also logical in view of this disclosure of the use of diisocyanates and diols. According to appellants' interpretations of their cited passages, the reference definitively requires each prepolymer molecule to contain a plurality of hydroxyl groups; however, if diisocyanates and diols are used, as disclosed by one embodiment of the reference, then the resulting prepolymer molecule could not contain a plurality of hydroxyl groups, though the resulting composition, as a whole, would contain a plurality of hydroxyl groups and isocyanate groups. Since the argued passages are not governed by a condition requiring the polyol to have greater than difunctionality, it is not seen that these passages can be selectively considered, as appellants have done, depending on the functionality of the polyol. It is again stressed that the examiner's interpretation is reasonable in view of the disclosed reaction species and index ratios. With respect to arguments concerning the reference's disclosed use of diols within the examples, the position is taken that the examples

do not negate the fact that the reference discloses the use of polyols, including triols and higher functional polyol; therefore, it is not seen that arguments pertaining to the use of diols are effective to patentably distinguish the instant claims from the prior art. In summation, none of appellants' arguments clearly addresses the fundamental fact that the reference discloses the reaction of appellants' reactants at an index ratio that will yield appellants' claimed product; therefore, none of appellants' arguments is sufficient to distinguish the instant claims from the prior art.

**(10) Response to Argument**

Appellants' arguments have been addressed within the **Grounds of Rejection**.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

RABON SERGENT
PRIMARY EXAMINER

Conferees:

Supervisory Patent Examiner James Seidleck

Supervisory Patent Examiner David Wu